

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Currently Amended) A process for recovering fluoropolymers, ~~which comprises~~ comprising:

contacting an ion exchange membrane comprising

a fluoropolymer having carboxylic acid groups (hereinafter referred to as a C-polymer), and

a fluoropolymer having sulfonic acid groups (hereinafter referred to as a S-polymer), and

having inorganic particles deposited on the surface,
with a solvent to let it said ion exchange membrane swell and to remove the inorganic particles from the surface,

then, contacting it said ion exchange membrane with a solvent which is a good solvent for the S-polymer and a poor solvent for the C-polymer to obtain a solid ~~composed~~ comprising mainly of the C-polymer and a solution having the S-polymer dissolved therein, and

recovering ~~them~~ said C-polymer and said S-polymer by solid-liquid separation;
wherein the solvent to let the ion exchange membrane swell is a mixed solvent comprising a water-soluble organic solvent and water.

2. (Canceled)

3. (Original) The process for recovering fluoropolymers according to Claim 1, wherein the solvent which is a good solvent for the S-polymer and a poor solvent for the C-

polymer, is such that the solubility of the S-polymer therein is at least 10 times the solubility of the C-polymer therein.

4. (Canceled)

5. (Original) The process for recovering fluoropolymers according to Claim 1, wherein before contacting with the solvent which is a good solvent for the S-polymer and a poor solvent for the C-polymer, the ion exchange membrane after removing the inorganic particles, is treated with an acid to convert the C-polymer and S-polymer from salt-form to acid-form.

6. (Canceled)

7. (Original) The process for recovering fluoropolymers according to Claim 1, wherein the C-polymer is a copolymer obtained by copolymerizing tetrafluoroethylene with a perfluoro vinyl ether having a carboxylic acid group and has an ion exchange capacity of from 0.8 to 1.9 meq/g dry resin.

8. (Canceled)

9. (Currently Amended) The process for recovering fluoropolymers according to Claim ~~[[2]]~~ 1, wherein the content of water in the mixed solvent comprising a water-soluble organic solvent and water, is at least 50 mass%.

10. (Currently Amended) The process for recovering fluoropolymers according to Claim [[2]] 1, wherein the water-soluble organic solvent is methanol or ethanol.

11. (Currently Amended) The process for recovering fluoropolymers according to Claim [[2]] 1, wherein the mixed solvent comprising a water-soluble organic solvent and water, is an aqueous ethanol solution, wherein the content of water is from 60 to 98 mass%.

12. (Original) The process for recovering fluoropolymers according to Claim 3, wherein the solvent which is a good solvent for the S-polymer and a poor solvent for the C-polymer, is ethanol, methanol, an aqueous ethanol solution having a content of water of at most 40 mass%, or an aqueous methanol solution having a content of water of at most 40 mass%.

13. (Currently Amended) The process for recovering fluoropolymers according to Claim [[4]] 1, wherein the solvent which is a good solvent for the S-polymer and a poor solvent for the C-polymer, is ethanol, methanol, an aqueous ethanol solution having a content of water of at most 40 mass%, or an aqueous methanol solution having a content of water of at most 40 mass%.

14. (Original) The process for recovering fluoropolymers according to Claim 7, wherein the C-polymer is one obtained by hydrolyzing a copolymer of tetrafluoroethylene and $\text{CF}_2=\text{CFOCF}_2\text{CF}(\text{CF}_3)\text{OCF}_2\text{CF}_2\text{CO}_2\text{CH}_3$.

15. (Original) The process for recovering fluoropolymers according to Claim 8, wherein the S-polymer is one obtained by hydrolyzing a copolymer of tetrafluoroethylene and $\text{CF}_2=\text{CFOCF}_2\text{CF}(\text{CF}_3)\text{OCF}_2\text{CF}_2\text{SO}_2\text{F}$.

16. (New) The process for recovering fluoropolymers according to Claim 1, wherein said inorganic particles comprise silicon carbide or zirconium oxide.

17. (New) The process for recovering fluoropolymers according to Claim 1, wherein said inorganic particles comprise at least one precipitate.

18. (New) The process for recovering fluoropolymers according to Claim 1, wherein said solvent for swelling the ion exchange membrane is selected from the group consisting of methanol, ethanol, n-propanol, i-propanol, dioxane, acetone, sulfolane, an ethylene glycol, a propylene glycol and mixtures thereof.

19. (New) The process for recovering fluoropolymers according to Claim 1, wherein said swelling occurs at a temperature of from 0 to 100°C.

20. (New) The process for recovering fluoropolymers according to Claim 1, wherein said swelling occurs at a temperature of from 15 to 50°C.

21. (New) The process for recovering fluoropolymers according to Claim 1, wherein each of the C-polymer and the S-polymer are recovered in a purity of at least 90 mass%.

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22. (New) The process for recovering fluoropolymers according to Claim 1, wherein each of the C-polymer and the S-polymer are recovered in a purity of at least 95 mass%.

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BASIS FOR THE AMENDMENT

Claims 2, 4, 6, and 8 have been canceled.

New Claims 16-22 have been added.

New Claim 16 is supported at page 4, lines 14-25.

New Claim 17 is supported at page 4, lines 14-25.

New Claim 18 is supported at page 6, lines 11-19.

New Claim 19 is supported at page 7, line 4.

New Claim 20 is supported at page 7, line 4.

New Claim 21 is supported at page 10, last paragraph.

New Claim 22 is supported at page 10, last paragraph.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1, 3, 5, 7, 9-22 will now be active in this application.